

3007 Rec'd PCT/PTO 14 JAN 2002

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER <b>KKH-013</b>
		U.S. APPLICATION NO. (If known, use 35 U.S.C. 371) <b>10/030711</b>
INTERNATIONAL APPLICATION NO. <b>PCT/JP00/04754</b>	INTERNATIONAL FILING DATE <b>14 July 2000</b>	PRIORITY DATE CLAIMED <b>15 July 1999</b>

TITLE OF INVENTION:

**PLUNGER FOR SYRINGE**

APPLICANT(S) FOR DO/EO/US

**Kazumi IJIMA et al.**

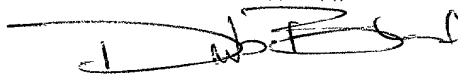
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a FIRST submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This express request to begin national examination procedures (35 U.S.C. 371(f) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(I).
4. ☐ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
  - a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☒ has been transmitted by the International Bureau
  - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ Amendment to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)).
  - a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
  - b. ☐ have been transmitted by the International Bureau.
  - c. ☐ have not been made; however, the time limit for making such amendment has NOT expired.
  - d. ☒ have not been made and will not be made.
8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 16 below concern either document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
13. ☐ A FIRST preliminary amendment.  
☐ A SECOND or SUBSEQUENT preliminary amendment.
14. ☐ A substitute specification.
15. ☐ A change of power of attorney and/or address letter.
16. ☐ Other items:

JC13 Rec'd PCT/PTO 14 JAN 2002

U.S. APPLICATION NO. (If known, see 37 CFR 1.1) <b>10/030711</b>		INTERNATIONAL APPLICATION NO. <b>PCT/JP00/04754</b>		ATTORNEY'S DOCKET NUMBER <b>Kkh-013</b>	
17. <input checked="" type="checkbox"/> The following fees are submitted:				CALCULATIONS	PTO USE ONLY
<b>Basic National Fee (37 CFR 1.49(a)(1)-(5):</b> Search Report has been prepared by the EPO or JPO.....				<b>\$ 890</b>	
International preliminary examination fee paid to USPTO (37 CFR 1.482) .....					
No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)).....					
Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO.....					
International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4).....					
<b>ENTER APPROPRIATE BASIC FEE AMOUNT =</b>				<b>\$ 890</b>	
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.49(e)).				<b>\$</b>	
Claims	Number Filled	Number Extra	Rate		
Total 5 Claims	5-20=	0	X \$18	\$	
Independent 2 Claims	2-3=	0	X \$84	\$	
Multiple dependent claim(s) (if applicable)			+ \$280	\$	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				<b>\$ 890</b>	
Reduction by 1/2 for filing by small entity, if applicable.				<b>\$</b>	
<b>SUBTOTAL =</b>				<b>\$ 890</b>	
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.49(f)).				<b>\$</b>	
<b>TOTAL NATIONAL FEE =</b>				<b>\$ 890</b>	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate sheet (37 CFR 3.28, 3.31). \$40.00 per property				<b>\$</b>	
<b>TOTAL FEES ENCLOSED =</b>				<b>\$</b>	
				Amount to be refunded	<b>\$</b>
				charged	<b>\$</b>
a. <input type="checkbox"/> A check in the amount of \$_____ to cover the above fees is enclosed.					
b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>18-0013</u> in the amount of <b>\$ 890.00</b> cover the above fees. A duplicate of this sheet is enclosed.					
c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>18-0013</u> . A duplicate copy of this sheet is enclosed.					
<b>NOTE:</b> Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.					
SEND ALL CORRESPONDENCE TO: Rader, Fishman & Grauer, L.P.P.C. 1233 20 <sup>th</sup> Street, N.W., Suite 501 Washington, DC 20036					
Dated: January 14, 2002				<div style="text-align: right;">             SIGNATURE  <u>David K. Benson</u>            NAME  <b>42,314</b>            REGISTRATION NUMBER         </div>	

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## DESCRIPTION

PLUNGER FOR SYRINGE

## 5 Technical Field

The present invention relates to a plunger for a syringe used for supporting and moving a gasket inserted in a syringe barrel.

## Background Art

10 In a general syringe, a liquid medicine is inhaled into its syringe barrel when it is used, but recently a prefilled syringe in which the liquid medicine is previously filled in the syringe barrel was developed to reduce a working load at a medical site. A prefilled syringe in which a contrast medium is filled in its syringe barrel has also come into use lately. Moreover,  
15 a prefilled plastic syringe in which a contrast medium is previously filled in its plastic syringe having comparatively large capacity is also used these days.

When such a syringe is used, a plunger is inserted from a rear end of the syringe barrel and a screw portion formed at a tip of the plunger is screwed in a rear face of a gasket so that the gasket is mounted at the tip of  
20 the plunger. The gasket is thus mounted at the tip of the plunger and the gasket is pushed via the plunger, which causes the liquid medicine to be injected into a body or the like. Further, since the contrast medium has comparatively high viscosity and resistance when the contrast medium is injected into the body via a blood-vessel, spinal cord, or the like is large,  
25 pressure injection is generally performed using a device such as an auto-injector in a case of using the syringe in which the contrast medium is filled.

When the gasket is mounted at the tip of the plunger in this way, if a center axis of the syringe barrel and a center axis of the plunger are not in a state of coinciding with each other, the screw portion at the tip of the plunger cannot be smoothly screwed into the rear face of the gasket. However, it is not easy to make the center axis of the syringe barrel and the center axis of the plunger coincide with each other and the screw portion at the tip of the plunger is sometimes forced to be screwed into the rear face of the gasket in a state in which both of the center axes deviate from each other.

However, if the gasket is mounted on the screw portion at the tip of the plunger in the state in which the center axis of the syringe barrel and the center axis of the plunger deviate from each other, the gasket at the tip of the plunger becomes in a skewed position (a position in which the center axis of the gasket deviates from the center axis of the plunger) and the gasket becomes unable to smoothly move in the syringe barrel, which causes a problem that performance in filling the liquid medicine deteriorates. In addition, as a result of the gasket being in the skewed position, clearance is made between an inner surface of the syringe barrel and an outer circumferential surface of the gasket and fluid leakage easily occurs from the clearance.

It is an object of the present invention to provide a plunger for a syringe in which a gasket can be mounted on a screw portion at a tip of the plunger in a state in which a center axis of a syringe barrel and a center axis of the plunger are easily made to coincide with each other.

## Disclosure of the Invention

In order to achieve the object, disclosed in claim 1 is a plunger for a

syringe used for supporting and moving a gasket inserted in a syringe barrel, which is characterized in that it comprises: a screw portion formed at a tip thereof for mounting the gasket; a pair of ring members arranged at an interval from each other at the rear of the screw portion around a center axis of the plunger; and a plurality of vane members arranged radially from the center axis of the plunger between the ring members, and that outer diameters of the ring members and the vane members are equal to an inner diameter of the syringe barrel or slightly smaller than the inner diameter.

In the plunger according to claim 1, the interval between the pair of ring members arranged at the rear of the screw portion is preferably, for example, 0.5 mm or larger. As for the plunger according to claim 1, when the syringe is used, the plunger is inserted from a rear end of the syringe barrel and outer circumferential surfaces of the pair of ring members arranged at the interval from each other at the rear of the screw portion and outer circumferential surfaces of the vane members abut on an inner surface of the syringe barrel to guide the plunger, which indicates that a center axis of the syringe barrel and the center axis of the plunger naturally become in a state of coinciding with each other when the plunger is inserted from the rear end of the syringe barrel. Therefore, using the plunger according to claim 1, the center axis of the syringe barrel and the center axis of the plunger are made to coincide with each other easily without precise positioning, which makes it possible to mount the gasket at the tip of the plunger in a correct state (a position in which a center axis of the gasket coincides with the center axis of the plunger). As a result, the gasket can move smoothly in the syringe barrel, which prevents deterioration of performance in filling a liquid medicine and fluid leakage from a part between the inner surface of the syringe barrel and

the outer circumferential surface of the gasket.

In the plunger according to claim 1, it is also suitable that the liquid medicine is previously filled in the syringe barrel as described in claim 2. Further, as described in claim 3, eight pieces of the vane members are  
5 arranged, for example, at regular intervals and at central angles of  $45^\circ$ .

In addition, as described in claim 4, it is also suitable that the plunger further comprises a flange portion formed at a rear end of the plunger; and one or two or more gripping ring members arranged near the front of the flange portion around the center axis of the plunger, and that outer diameters  
10 of the gripping ring members are equal to the inner diameter of the syringe barrel or slightly smaller than the inner diameter. Disclosed in claim 5 is a plunger for a syringe used for supporting and moving a gasket inserted in a syringe barrel, which is characterized in that it comprises: a screw portion formed at a tip thereof for mounting the gasket; a flange portion formed at a  
15 rear end thereof; and one or two or more gripping ring members arranged near the front of the flange portion around a center axis of the plunger, and that outer diameters of the gripping ring members are equal to an inner diameter of the syringe barrel or slightly smaller than the inner diameter.

As for the plunger according to claims 4 and 5, when the plunger is  
20 inserted from a rear end of the syringe barrel, the gripping ring members can be gripped so that the tip of the plunger can be easily inserted.

#### Brief Description of Drawings

FIG. 1 is a side view of a plunger according to an embodiment of the  
25 present invention;

FIG. 2 is a front view of the plunger seen from a tip of the plunger;

FIG. 3 is a cross-sectional view taken along the A-A line in FIG. 1;

FIG. 4 is a cross-sectional view taken along the B-B line in FIG. 1;

FIG. 5 is an explanatory view in a state in which the plunger according to the embodiment of the present invention is inserted in a syringe;

5 and

FIG. 6 is an explanatory view in a state in which a gasket is mounted on the tip of the plunger.

### Best Mode for Carrying out the Invention

10 A preferred embodiment of the present invention will be explained below with reference to the drawings.

At a tip of a plunger 1, a screw portion 10 for mounting a gasket 25 provided in a later-described syringe 2 is formed. At the rear of the screw portion 10 (the right in FIG. 1), a pair of ring members 12 and 13 are arranged at an interval from each other and a plurality of vane members 14 are arranged between the ring members 12 and 13. One of the ring members 12 is arranged in contact with the screw portion 10 at the tip of the plunger 1 while the other one of the ring members 13 is arranged at the rear of the one of the ring members 12 at the interval therebetween, and the interval between the ring members 12 and 13 is 0.5 mm or larger.

Each of the ring members 12 and 13 has a discoidal shape around a center axis O of the plunger 1. Diameters D1 of the ring members 12 and 13 are equal to an inner diameter D of a syringe barrel 20 of a later-described syringe 2 or slightly smaller than the inner diameter D of the syringe barrel 20.

In this embodiment, eight pieces of the vane members 14 are arranged

between the ring members 12 and 13. As shown in FIG. 3, the vane members 14 are arranged radially from the center axis O of the plunger 1 and the vane members 14 are arranged around the center axis O of the plunger 1 at regular intervals and at central angles of  $45^\circ$ . An outer diameter D2 of the vane members 14 is also equal to the inner diameter D of the syringe barrel 20 of the later-described syringe 2 or slightly smaller than the inner diameter D of the syringe barrel 20.

At a rear end of the plunger 1 (the right end in FIG. 1), a flange 15 is formed. Further, between the flange 15 and the ring member 13, a rib 16 whose cross-sectional shape is a shape of a cross as shown in FIG. 4 is provided. Furthermore, a gripping ring member 17 is arranged near the front (near the left in FIG. 1) of the flange portion 15 at the rear end of the plunger 1. The gripping ring member 17 has also a discoidal shape around the center axis O of the plunger 1. In addition, a diameter D3 of the gripping ring member 17 is also equal to the inner diameter D of the syringe barrel 20 of the later-described syringe 2 or slightly smaller than the inner diameter D of the syringe barrel 20. The plunger 1 as described above can be integrally molded of plastic such as, for example, polypropylene.

As shown in FIG. 5, in the syringe 2, at a tip (the left end in FIG. 5) of the syringe barrel 20 which has a cylindrical shape, a lure lock portion 21 is provided, and the lure lock portion 21 is in a state of being covered by a cap 22 before the syringe 2 is used. The inner diameter D of the syringe barrel 20 is equal to the diameters D1 of the ring members 12 and 13, the diameter D3 of the gripping ring member 17, and the outer diameter D2 of the vane members 14 explained above, or slightly larger than the diameters D1 of the ring members 12 and 13, the diameter D3 of the gripping ring member 17,



and the outer diameter D2 of the vane members 14. Material of the above-described syringe barrel 2 is plastic such as a cyclic polyolefin resin, for example.

In the syringe barrel 20, liquid 23 such as, for example, a contrast medium is filled. Further, a gasket 25 having a substantially columnar shape is inserted in the syringe barrel 20 from an open rear end (the right end in FIG. 5) of the syringe barrel 20, and by the insertion of the gasket 25 in the syringe barrel 20, the liquid 23 is in a state of being sealed in the syringe barrel 20. An outer circumferential surface of the gasket 25 is in close contact with an inner surface of the syringe barrel 20, and thereby, the liquid 23 is not leaked from a part between the outer circumferential surface of the gasket 25 and the inner surface of the syringe barrel 20. In a rear face of the gasket 25 (the right end face in FIG. 5), a screw hole 26 into which the screw portion 10 formed at the tip of the aforesaid plunger 1 is screwed is formed.

Here, when the syringe 2 is used, the tip of the plunger 1 according to the embodiment of the present invention is first inserted from the rear end of the syringe barrel 20. In this case, in the plunger 1 of the embodiment, since the gripping ring member 17 is arranged near the front of the flange portion 15 at the rear end of the plunger 1, the gripping ring member 17 can be gripped when the plunger 1 is thus inserted from the rear end of the syringe barrel 1 and the plunger 1 can be easily inserted.

When the tip of the plunger 1 is inserted from the rear end of the syringe barrel 20 in this way, as shown in FIG. 5, outer circumferential surfaces of the ring members 12 and 13 and outer circumferential surfaces of the vane members 14 abut on the inner surface of the syringe barrel 20 to guide the plunger 1 so that the center axis O of the plunger 1 naturally

becomes in a state in which it coincides with a center axis of the syringe barrel 20. In the state in which the center axis O of the plunger 1 coincides with the center axis of the syringe barrel 20, the plunger 1 is pushed straight into the syringe barrel 20 and the plunger 1 is further turned to screw the screw portion 10 at the tip of the plunger 1 into the screw hole 26 on the rear face of the gasket 25 so that the gasket 25 can be mounted at the tip of the plunger 1 in a correct position (a position in which the center axis of the gasket 25 is made to coincide with the center axis of the plunger 1) as shown in FIG. 6.

On the other hand, as shown in FIG. 6, an end of an extension tube 30, for example, is set at the lure lock portion 21 at the tip of syringe barrel 20. The gasket 25 is then pushed via the plunger 1 and thereby the liquid medicine 23 can be injected into an intended position in a body or the like through the extension tube 30.

Although an example in which only one of the gripping ring member 17 is provided near the front of the flange portion 15 at the rear end of the plunger 1 is explained in the embodiment shown in the drawings, two or more of the gripping ring members 17 may be provided near the front of the flange portion 15. Incidentally, an example of the plunger 1 in which the pair of ring members 12 and 13 and the gripping ring member 17 are formed around the center axis O of the plunger 1 and the vane members 14 are arranged radially from the center axis O of the plunger 1 is explained above, but it can be also considered that the whole plunger is formed in a round rod shape having a diameter equal to the inner diameter D of the syringe barrel 20 or slightly smaller than the inner diameter D instead of providing the aforesaid ring members 12, 13, and 17 and vane members 14. If the whole

plunger is so formed in the round rod shape, however, a so-called dimensional shrink is caused in dimensional finishing when molded, which makes it difficult to obtain a plunger of accurate size. Accordingly, if the plunger is structured to have the ring members 12, 13, and 17 and the vane members 14, as the plunger 1 explained in the embodiment of the present invention, such a dimensional shrink can be prevented and the plunger 1 of accurate size can be obtained.

#### Industrial Availability

According to claims 1 to 4, it becomes possible to make a center axis of a syringe barrel and a center axis of a plunger coincide with each other easily without precise positioning so that a gasket can be mounted at a tip of the plunger in a correct position in which a center axis of the gasket coincides with the center axis of the plunger. Therefore, when the syringe is used, the gasket can move in the syringe barrel smoothly, which prevents deterioration of performance in filling a liquid medicine and fluid leakage from a part between an inner surface of the syringe barrel and an outer circumferential surface of the gasket. Further, according to claims 4 and 5, when the plunger is inserted from a rear end of the syringe barrel, a gripping ring member can be gripped so that the tip of the plunger can be easily inserted.

## CLAIMS:

1. A plunger for a syringe used for supporting and moving a gasket inserted in a syringe barrel, comprising:
  - 5 a screw portion formed at a tip thereof for mounting the gasket;
  - a pair of ring members arranged at an interval from each other at a rear of said screw portion around a center axis of the plunger; and
  - a plurality of vane members arranged radially from the center axis of the plunger between said ring members,
  - 10 wherein outer diameters of said ring members and said vane members are equal to an inner diameter of the syringe barrel or slightly smaller than the inner diameter.
2. A plunger for a syringe according to claim 1,
  - 15 wherein a liquid medicine is previously filled in the syringe barrel.
3. A plunger for a syringe according to claim 1,
  - wherein eight pieces of said vane members are arranged at regular intervals and at central angles of  $45^{\circ}$  .
  - 20
4. A plunger for a syringe according to claim 1, further comprising:
  - a flange portion formed at a rear end of the plunger; and
  - one or two or more gripping ring members arranged near a front of the flange portion around the center axis of the plunger,
  - 25 wherein outer diameters of said gripping ring members are equal to the inner diameter of the syringe barrel or slightly smaller than the inner

diameter.

5. A plunger for a syringe used for supporting and moving a gasket inserted in a syringe barrel, comprising:

5 a screw portion formed at a tip thereof for mounting the gasket;

a flange portion formed at a rear end thereof; and

one or two or more gripping ring members arranged near a front of said flange portion around a center axis of the plunger,

10 wherein outer diameters of said gripping ring members are equal to an inner diameter of the syringe barrel or slightly smaller than the inner diameter.

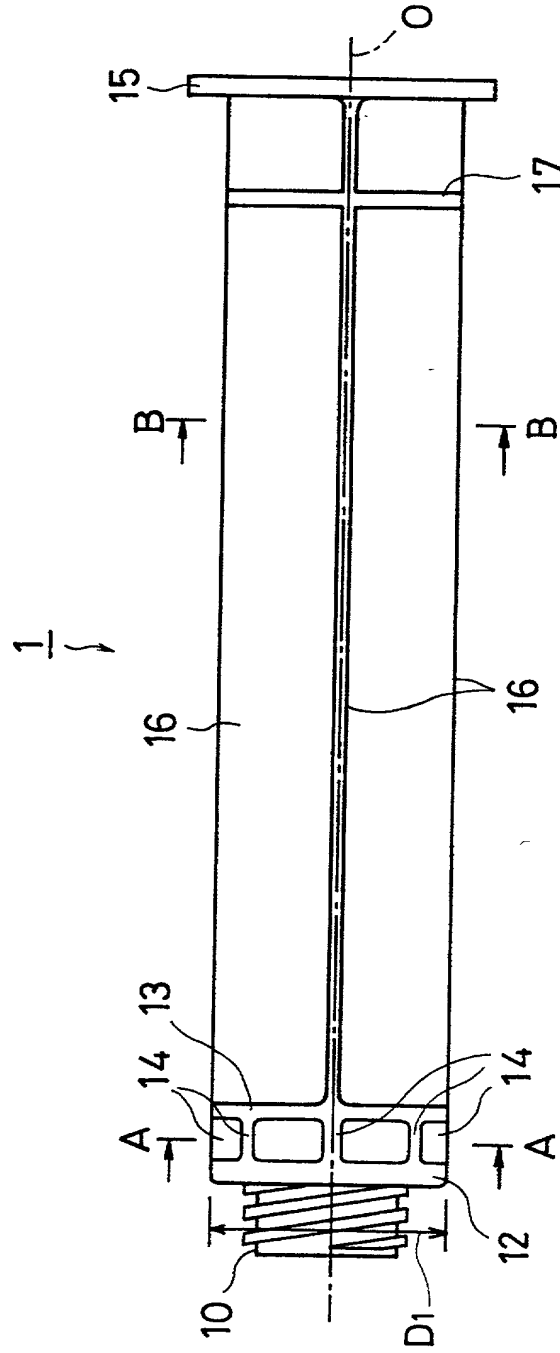
## ABSTRACT

A gasket 7 used for a prefilled syringe 1 in which liquid 3 is filled, having a constriction 8 on its circumferential side face in contact with an inner surface of a syringe barrel 2 and having a bottom face 7c which is not  
5 in contact with the liquid 3 whose circumference is formed in a tapered shape.

## Explanation of Codes

	1	plunger
	2	syringe
5	10	screw portion
	12, 13	ring member
	14	vane member
	15	flange
	16	rib
10	17	ring member
	20	syringe barrel
	21	lure lock portion
	22	cap
	23	liquid
15	25	gasket
	26	screw hole
	30	extension tube

FIG. 1





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FIG. 2

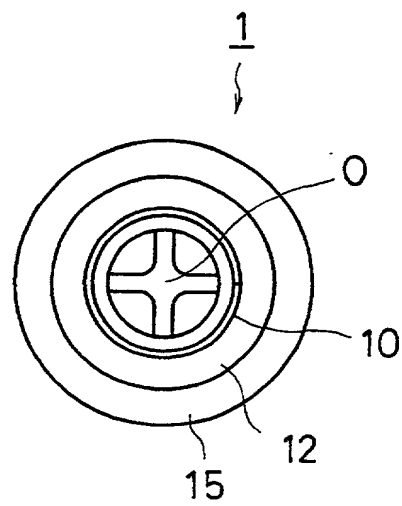


FIG. 3

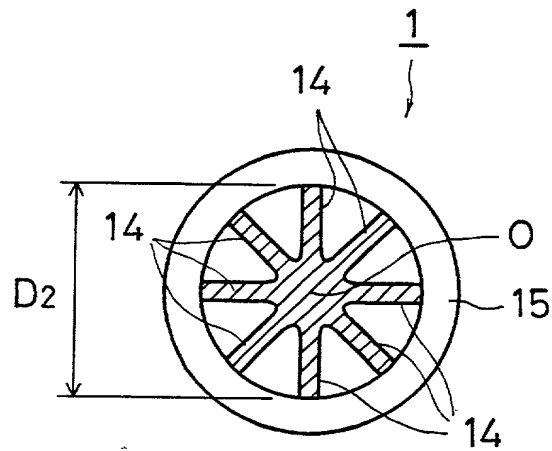


FIG. 4

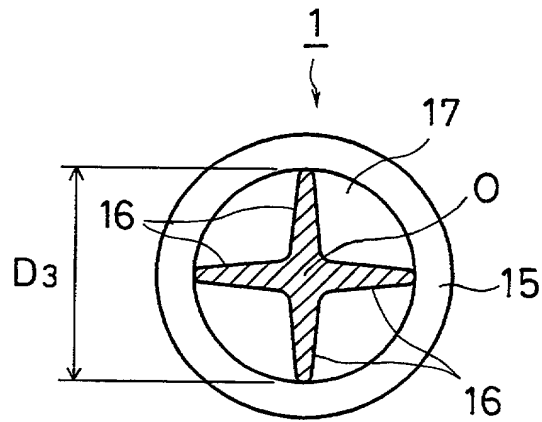
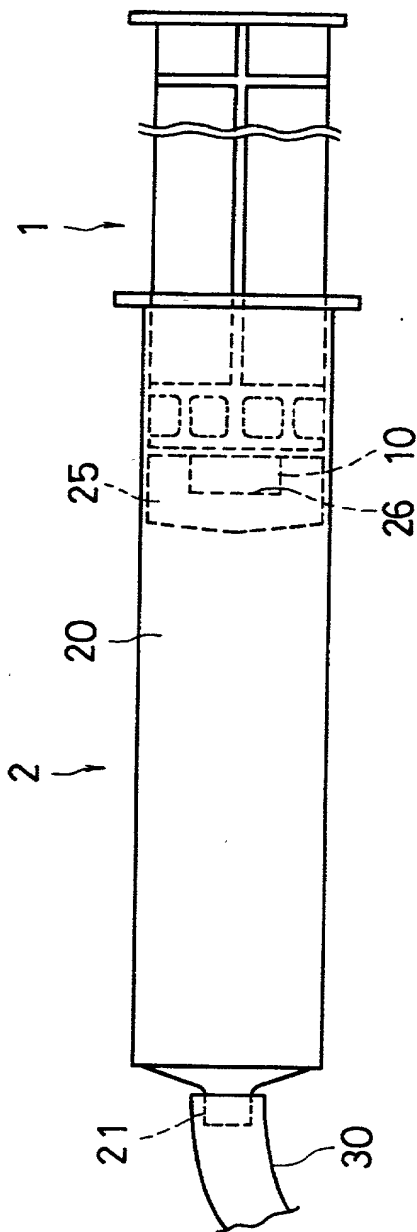




FIG. 6



## Declaration and Power of Attorney For Patent Application

## 特許出願宣言書及び委任状

## Japanese Language Declaration

## 日本語宣言書

下記の氏名の発明者として、私は以下の通り宣言します。 As a below named inventor, I hereby declare that:

私の住所、私書箱、国籍は下記の私の氏名の後に記載された通りです。

My residence, post office address and citizenship are as stated next to my name.

下記の名称の発明に関して請求範囲に記載され、特許出願している発明内容について、私が最初かつ唯一の発明者（下記の氏名が一つの場合）もしくは最初かつ共同発明者であると（下記の名称が複数の場合）信じています。

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

PLUNGER FOR SYRINGE

上記発明の明細書（下記の欄で x 印がついていない場合は、本書に添付）は、

the specification of which is attached hereto unless the following box is checked:

☐ 月 日に提出され、米国出願番号または特許協定条約国際出願番号を \_\_\_\_\_ とし、  
(該当する場合) \_\_\_\_\_ に訂正されました。

☒ was filed on July 14, 2000  
as United States Application Number or  
PCT International Application Number  
PCT/JP00/04754 and was amended on  
\_\_\_\_\_ (if applicable).

私は、特許請求範囲を含む上記訂正後の明細書を検討し、内容を理解していることをここに表明します。

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

私は、連邦規則法典第 37 編第 1 条 56 項に定義されるとおり、特許資格の有無について重要な情報を開示する義務があることを認めます。

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

# Japanese Language Declaration (日本語宣言書)

私は、米国法典第35編119条(a)-(d)項又は365条(b)項に基づき下記の、米国以外の国の少なくとも一か国を指定している特許協力条約365(a)項に基づく国際出願、又は外国での特許出願もしくは発明者証の出願について外国優先権をここに主張するとともに、優先権を主張している、本出願の前に出願された特許または発明者証の外国出願を以下に、枠内をマークすることで、示しています。

I hereby claim foreign priority under Title 35, United States Code, Section 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

## Prior Foreign Application(s)

外国での先行出願

## Priority Claimed

優先権主張

JP11-201814

Japan

July 15, 1999

(Number)  
(番号)(Country)  
(国名)(Day/Month/Year Filed)  
(出願年月日)☒☐

Yes

No

はい

いいえ

PCT/JP00/04754

PCT

July 14, 2000

(Number)  
(番号)(Country)  
(国名)(Day/Month/Year Filed)  
(出願年月日)☒☐

Yes

No

はい

いいえ

私は、第35編米国法典第119条(e)項に基づいて下記の米特許出願規定に記載された権利をここに主張いたします。

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below.

(Application No.)  
(出願番号)(Filing Date)  
(出願日)(Application No.)  
(出願番号)(Filing Date)  
(出願日)

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I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s), or 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of application.

(Application No.)  
(出願番号)(Filing Date)  
(出願日)(Status: Patented, Pending, Abandoned)  
(現況: 特許許可済、係属中、放棄済)(Application No.)  
(出願番号)(Filing Date)  
(出願日)(Status: Patented, Pending, Abandoned)  
(現況: 特許許可済、係属中、放棄済)

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# Japanese Language Declaration (日本語宣言書)

委任状: 私は下記の発明者として、本出願に関する一切の  
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